

DOCUMENT RESUME

ED 067 725

EA 004 370

TITLE A Day in the Life: Case Studies of Pupils in Open Plan Schools.

INSTITUTION York County Board of Education, Aurora (Ontario).

PUB DATE 70

NOTE 65p.

EDRS PRICE MF-\$0.65 HC-\$3.29

DESCRIPTORS Case Studies (Education); *Classroom Observation Techniques; Discovery Learning; Educational Research; Elementary Grades; *Open Plan Schools; Program Evaluation; *School Environment; Space Orientation; *Student Behavior; Student Participation; Student Responsibility; *Student Teacher Relationship

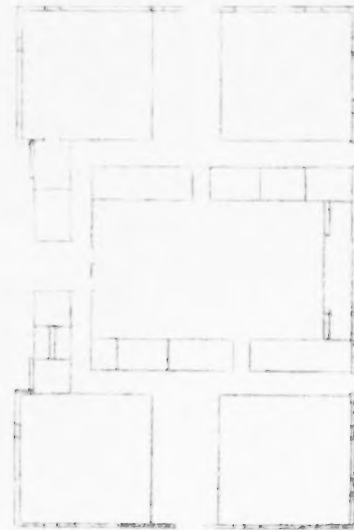
ABSTRACT

The first phase of a study to assess York County's new open plan schools is reported in this document. The study focused on the behavioral outcomes for students exposed to the open plan schools' programs. Three control county elementary schools were matched with the four open plan schools on age, socioeconomic conditions in attendance areas, and general geographic location. Students were randomly selected from these schools and observed as unobstrusively as possible during an entire school day by members of the observation team of seven principals and two master teachers. Observation results indicated a trend for these behaviors to be more readily observable in open plan schools than in the control schools: (1) pupils initiate activities that reflect their personal interests and these activities are given a chance to flourish in the day's activities; (2) pupils make (generally) good use of opportunities to display personal responsibility; (3) cooperative planning (teacher-teacher, teacher-pupil) takes place, and (4) pupils demonstrate the spirit of inquiry by raising pertinent questions. The document contains 10 representative cases out of the 18 made and the 15 completed for the study, a selected bibliography, an explanation of the study methodology, and the principals' statement of the open plan schools' common purposes. Data from all 15 completed case studies are included in various summaries in the concluding chapter. (Author/MLF)

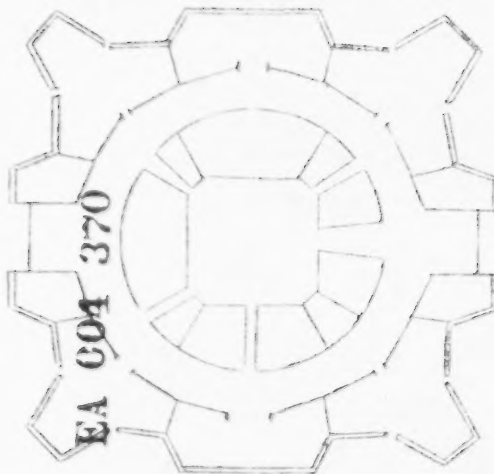
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A DAY IN THE LIFE
CASE STUDIES OF PUPILS IN
OPEN PLAN SCHOOLS



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Research Office
Division of Planning and Development
York County Board of Education
August
1970

ACKNOWLEDGMENT

In giving so generously of their time, energy, and talents in the planning and execution of this research, the following educators made this study possible:

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Meadowbrook Public School

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~~Subsidiary~~/not included

CHAPTER I

THE OPEN PLAN SCHOOL: AN OVERVIEW

What is an "Open Plan" School?

Since the mid-1960's the interiors of many new elementary schools in the United States and Canada have been designed with fewer partitions than usual, thus creating large, unobstructed learning areas. These have been commonly called "open plan" or "open space" or "open concept" schools. Often some of the larger interior open areas could be subdivided by moveable partitions and so these have also been called "flexible" or "versatile" schools. Because these relocatable interior partitions may normally be moved at will and at once, the open areas or the school themselves are sometimes described as "malleable." No single term can describe all the combinations of openness and flexibility of spatial arrangements found in the dozens if not hundreds of such new schools. For convenience, the term "open plan school", which is commonly heard in Ontario, is the designation this report will use for all such schools including the four new York County elementary schools which began operations between December 1968 and September 1969. Three of these schools were initially planned to provide open space areas while one was redesigned before construction to provide a number of large open areas.

In Schools Without Walls (1965), the first major work on open plan schools, the Farmer and Weinstock description of "educational containers which mold themselves to the fluid activities within, instead of the other way around" provided the major article of faith for the now fashionable schools.¹

Open plan schools are designed or redesigned to foster currently favored methods of organizing pupils, teachers, and resources. If two words can distinguish the flexible open plan school from its predecessor, these words must be "interaction" and "accessibility". A marked increase in interactions between teacher and teacher and also between pupil and pupil (but not necessarily more teacher-pupil exchanges) and the ready accessibility to learning resources are to be noted in open plan schools. To encourage cooperative planning and teaching the open areas provide room enough for two or more teachers and a "class" consisting of the equivalent of two or more standard classes. Accessibility is generally interpreted as "freedom of movement" or "classroom mobility" which was identified as an important precondition in studies of

1. Margaret Farmer and Ruth Weinstock, Schools Without Walls (New York: Educational Facilities Laboratories, 1965), p.3.

effective learning environments even before the advent of open plan schools.² In most schools planned before 1965, if learning resource centers were built, they were often isolated from the site of teaching-learning activities by walls and halls. In many open plan schools, the commonly required learning materials are located in the open teaching areas and there is direct access to a comprehensive resource center.

All schools today seek to minimize or eliminate rows of standard classrooms flanked along funnelling corridors. It has long been held that traditional arrangements of walls and halls fragment and compartmentalize resources and people to the detriment of the teaching-learning processes. Conventional egg-crate architecture is said to inhibit cooperative planning and instruction by consigning teachers to separate cells. The learner-inmates committed to these compartments are there entrusted to the limited mental and physical resources that one teacher and 800 square feet encompass.

Naturally, when several teachers and 100 or possibly 200 youngsters are assembled in one large, more or less open area and the learners are given the freedom to work (and talk) with each other plus the freedom to move about to find needed materials or equipment or teachers, the activity and noise levels generated may frighten the casual observer. Most children, hopefully, soon develop a "selective insensitivity" to such distractions. Careful thought has to be given to ensure that architecture and program dovetail to create the minimum of noise and confusion. The architect, for instance, must create rational traffic patterns and use appropriate sound dampeners such as carpets and acoustic tiles to minimize confusion and noise. Principals must devise schedules which minimize distraction and teachers must plan carefully the use of audiovisual equipment, or movement of partitions, or rearrangements of furniture and furnishing.

Such mechanics should not be viewed as ends in themselves. They are only organizationally important: they exist to provide the proper arrangement of facilities for cooperative planning and instruction by teachers. What then are the pedagogic purposes for which this open space organization exists? Certainly there has not been as much concern with establishing and assessing the learning outcomes desired of the new schools as has been shown for mechanics or organization. The literature abounds in articles of self-congratulation on the establishment of open plan schools.³

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2. See, for instance, the studies in Donald M. Medley and Harold E. Mitzel, "Measuring Classroom Behavior By Systematic Observation," in N. L. Gage (Ed.), Handbook of Research on Teaching (Chicago: Rand McNally, 1963).
 3. Open Plan Schools, a bibliography of journal articles, reports, and occasional Papers has been prepared by the Research Office and is available on request.

But there have been few studies concerned with validating the pedagogic, as distinct from architectural or other claims, for the open plan school. Let us review the nature and substance of these many claims before examining what evidence exists to support them.

The Open Plan School as a Response to Change

Most writers view the open plan school as an attempt to accommodate the recent changes in school curricula, organization, and staff use. These changes are thought necessary to prepare young people for life in the 1970's and beyond. The changes required of the open plan school extend beyond mere architectural innovation and modified operation. Change requires some acceptance of a new culture and philosophy as well.

Physically, the innovations of the open plan school are products of the ongoing revolutions in communications and construction technology and, to a lesser extent, of improvements in mass transportation. Such changes make large, "wired for sound," centralized schools possible. The new schools, with their spacious, unobstructed learning areas and electronic teaching aids, are also responses to increases and redistribution of population. Today's new culture, new schools, and new pedagogy also reflect the vast increment in knowledge in all fields, including the behavioral and social sciences with their new insights into teaching and learning. Important for modern curricula are other scientific or technological advances such as automation and cybernation. According to some thinkers, the impact of such developments is so great that in the near future they may make obsolete much of the educational system designed to meet the needs of the production-oriented world and its relatively static concept of knowledge, skills, and occupations.⁴ To date, the consequences of changes of this nature are embodied in an emerging expansion of the principle of universal education. This new philosophy seeks to stimulate every young person to respond to internally-generated standards, to achieve self-fulfillment.

Curricula which accept such premises tend more than before to stress the meaningfulness or relevance (sometimes misinterpreted as immediacy) of their offerings to the personal and social needs of learners. The methods of such curricula emphasize learning above teaching and place greater value on inquiry and discovery by the learners than on expositions, demonstrations, and questions by teachers. Self-discipline, capacity for independent study, originality and creativity, humaneness (deep regard for others) are not only the main purposes of such curricula but also the means whereby today's

4. See, for instance, Murdock K. MacDonald, "The New School," in Education and the Innovative Society, a report on the 46th Conference of the Canadian Education Association, Sept. 24-26, 1969 (Toronto: the Association, 1969).

pupils can exercise control over the uncertain future they will encounter outside the schools as adults. Acceptance of this viewpoint is not limited to open plan schools, nor do all teachers in such schools subscribe to all aspects of this philosophy. But the open plan schools may best accommodate these increasingly popular sentiments.

A Historical Review

In a 1966 report, the Ontario Teachers' Federation School Planning and Building Research Committee stated that the "standard" elementary classroom was being built and equipped then much as it had been built and equipped thirty years previously. Allowing that tile or carpeting had replaced wooden floors, that concrete blocks had replaced plaster walls, that florescent fixtures had replaced incandescent lights and that other superficial changes had occurred, the schools and classrooms of the early 1960's very much resembled those of the days of the Great Depression. The typical Ontario school of the early 1960's was in many ways only a number of one-room schools strung together with a general purpose room or gymnasium, and perhaps a swimming pool or other recent amenities.

Toward the mid-1960's the first evidence of substantial architectural innovation was beginning to be seen in newer but not necessarily open concept schools. Team teaching rooms, seminar rooms, staff work areas, libraries or resource centers of adequate dimensions and fixtures, with viewing, listening, and storage areas for the growing host of teaching aids were to be found in the schools for the 1960's.

In the open plan school (which in Ontario made its appearance about 1967), and in some of the conventional schools of the 1960's, the building thus reflects the growing respect for individual differences. Concern for the development of many different types of human personality also called for changes in the ways learners and teachers were organized, both in respect to horizontal organization (grouping for learning) and vertical organization ("movement" or "promotion" from entry to graduation). Non-gradedness and continuous progress were the profession's response to individual needs and both these techniques were to be facilitated by the open plan school.

Today and Tomorrow

Generally, the principle of constant regrouping of pupils and staff for different learning experiences had displaced the often arbitrary grouping of a number of learners (about 30 in the elementary school) with one teacher for most of the time. Constant regrouping is easier when there are no barrier walls separating the pool of pupils and staff. Thanks to carpeting, acoustical tiles, etc, physical constraints on group size have diminished. Now it is mainly only the developmental level of learners with regard to the learning situation which determines the size and number of groupings.

The impact of change in any dimension varies from community to community. Similarly the readiness of a school staff to embrace the new bases for curricula varies. Many schools, including the new open plan schools, are today in a period of transition. In the near future schools will probably organize space on several criteria: expandable space allowing for ordered growth, convertible space which readily adapts to program changes, and versatile space serving many functions. At present, open plan schools may meet these criteria much better than conventionally built schools. Many open plan schools may be restructured, by operating their moveable walls, to resemble the more conventional schools so that the virtues of such organization may be exploited when appropriate. Some now prefer that the new schools be designed so that open areas can be restructured at a later date by more or less permanent partitions. This versatility also represents a hedge against the possibility that the open plan philosophy is not well suited to some learners all the time or all learners some of the time.

Open plan schools commonly group youngsters, whose ages span several years, in one area under the direction of a team of teachers. Thus the continuous progress of the learners is more readily managed. A youngster normally will spend about three years with this group thus eliminating the annual trauma of promotion or failure. Staff has longer to come to know the learners and to provide for their individual differences. Contracting or expanding the number of years a pupil spends with the group also serves individualization of program.

Testing the Claims

There have been only two significant and, for York County, relevant Canadian studies of open plan schools reported in the literature to date. Pupil and teacher behavior in the new physical and social setting have both been studied.⁵ Tabulated below are the claims made for the open plan school investigated in these two studies, with an indication of whether the claims were supported. Both studies involved open plan schools and one or more "non-open" schools representing different modes or organization. The claims were handled in a comparative way. That is, the open plan school was alleged to be superior to other schools in certain respects and this claim was either supported, rejected, or considered not significantly different. Evidence was collected by observations, including semantic differential questionnaires, made in the schools.

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5. F. S. Wilson, R. Langevin, and T. Stuckey, Are Pupils in the Open Plan School Different? Ottawa: Canadian Council for Research in Education, 1969.
M. Ellison, L. L. Gilbert, and E. W. Ratsoy, "Teacher Behavior in Open-Area Classrooms," The Canadian Administrator, VIII (Feb. 1969).

CLAIMED FOR THE OPEN PLAN SCHOOL	FINDINGS OF THE STUDIES
A. Pupils show greater . . .	
1. self-discipline	supported
2. maturity	supported
3. absorption in activities	supported
4. regard toward the school	supported
5. self-regard	supported
6. productive thinking	supported
7. social adjustment (absence of "problem children")	supported
8. creativity	rejected
9. curiosity	no significant difference
10. initiation of activities	supported
B. Teachers . . .	
1. regroup pupils more frequently	supported
2. spend more time giving pupils individual attention	no significant difference
3. regroup pupils for small group activities more frequently	rejected
4. spend more time observing other teachers	supported
5. spend less time in "spares"	supported
6. spend less time presenting information	rejected

The results of these studies are certainly not the last word but they are at least encouraging for the open plan school. It might be unrealistic to believe that all these findings would be supported in each and every classroom in open plan schools when compared with conventional schools and experimental schools of other sorts. It would be a mistake to assume that the above claims are the only desirable outcomes of an educational program or that, if the list were extended, the open plan schools would show themselves to be achieving to the same extent with the additional standards. The present study, as we shall see, re-examines some though not all of these claims. It probes behind the labels to reveal the flow of pupil and teacher behaviors in the open areas on typical days.

As always, staffing and other considerations need to be taken into account in studies of school design and its consequences. The school plant only provides the opportunity. What actually happens within the social and philosophical framework,

As always, staffing and other considerations need to be taken into account in studies of school design and its consequences. The school plant only provides the opportunity. What actually happens within the social and philosophical framework, within the architecture, within the curricular plan, ultimately depends upon the people in the schools themselves. Open plan architecture may be viewed as an important resource for the professional growth of staff and the personal growth of learners. This point is sometimes forgotten. Because it is harder to modify people than to erect new buildings, the benefits of the open plan school will likely come gradually and only then if as much attention is given to pupil growth and to staff development as is given to bricks and mortar. In the York County study, attention has been given to "the fluid activities within" rather than to the "educational containers".

CHAPTER 2

THE OPEN PLAN STUDY: PURPOSE AND METHOD

Purpose

What curriculum goals do York County's new open plan schools hold? In what ways do their instructional objectives and methods differ from those of similar county elementary schools previously built in conventional fashions? Do pupils of the open plan schools acquire the skills and attitudes sought by their teachers? Do pupils in other schools also demonstrate much the same work patterns and similar repertoires of accomplishments even if their school's major objectives are somewhat dissimilar to open plan school aims?

These and a host of similar questions are on the minds of educators faced with the need of assessing the open plan school operation, even before it is a year old. Summative evaluation is admittedly premature; the open plan school operation is still in a state of becoming rather than being. At this stage there is no easy way of screening out the current strong reactive effects reflecting the schools' novelty impact on the emotions of staff, pupils, and parents. Nevertheless, what valid information can we glean from these schools that will be useful now? There are many decisions pending: whether to adjust operations and architecture in these schools for next year; whether the new elementary schools which must be built shall be partly or wholly open plan or some other scheme; and whether in-service education programs must be provided for teachers who will be working in open plan schools, if such are to remain in operation next year.

The investigation undertaken in the winter and early spring of 1970 is phase one of this study. From the outset there was agreement that whatever else is significant, the most important consideration is to produce a clear picture of what it is like to be a pupil in an open plan school in York County. What happens to the learner is indisputably the criterion against which architecture and operations must be assessed. With the child at the focus, environment assumes its proper place - facilitating child development and not an end in itself.

The focus of this study is on the behavioral outcomes for pupils exposed to the open plan schools' programs. Outcomes may be classified as either spontaneous behaviors, or as performances or expressions of attitude that are evoked by requests questions, commands, etc., whether in the school or outside it. For the time being, we are concerned with behavior and attitudes at school, a common practical limit which is not entirely satisfactory to parents and educators who are increasingly concerned with out-of-school behavior. Given these limitations, the methodology of this study thus becomes concerned with

- (1) identifying the relevant outcomes to be looked for,

- (2) devising means of noting the presence or absence of the criterion (designated) behaviors and attitudes,
- (3) applying appropriate "controls" so that it may be determined whether the observed outcomes result from the open plan organization or other factors.

While this phase of the study is almost entirely concerned with objective (and selective) description, some investigators were specifically asked to make certain judgments (e.g., "Would you like to be a pupil in this setting?"). As we shall see, some investigators declined to "evaluate", even when invited, on the grounds that this was a task for the consumers of this report - the staff of the schools, parents, trustees, and administrators. They argued convincingly that these or other interested persons need also to determine whether the goals of the schools are appropriate and valuable. This study describes how fully the goals were achieved, to the extent they were observable. It may raise questions about these goals because unwanted behaviors were also observed.

Method: The Control Function

A common problem in such investigations is that of determining whether outcomes are attributable to the experimental variable (the open plan operation) or to random variables. In a true experiment, a control situation is established. In the control, the experimental variable is missing but, ideally, all other variables are present to the same degree as in the experimental situation. Naturally, such ideal pairing is impossible when dealing with such complex units as schools. Random assignment (of experimental and control conditions), the alternative and preferable control method, is out of the question in this case. The best that can be done is a matching on a limited number of critical factors.

For this study, three county elementary schools were "matched" with the four open plan schools. The number of variables for which close matching is possible is usually limited. To begin, the control schools were fairly well matched to the open plan schools on the following characteristics:

- (1) the age of the schools,
- (2) the socio-economic conditions in their attendance areas,
- (3) general geographic location (proximity).

It turned out that matching also occurred in other dimensions.

TABLE 1: SELECTED CHARACTERISTICS OF OPEN PLAN AND CONTROL SCHOOLS

	Built ¹	Enrolment	"Grades"	Staff ²	Pupils per ³ "teacher"	E.Q. ⁴	Physical Resources Adequacy ⁵		
							AV Aids	Other Equipment	Space
A. Open Plan Schools									
1.	1968	545	K-8	27(14)	28	100	No significant difference in range of available aids but quantity is more satisfactory in control schools	No significant difference in the adequacy of instructional, recreational, and administrative equipment	The space for instructional, recreational, and administrative activities is significantly less adequate in the control schools
2.	1969	390	6-8	20(15)	24	90			
3.	1969	450	1-8	19(8)	32	74			
4.	1969	415	7-8	24(17)	22	92			
Avg.		450		22.5(13.5)	27+	93			
B. Control Schools									
5.	1966	285	7-8	13(8)	26	69			
6.	1966	375	K-6	18(4)	28	117			
7.	1967	425	K-8	16(7)	31	56			
Avg.		360		15.7(6.7)	28+	83			

1 - Age of control school is taken to be that of most recent addition.

2 - Professional staff only: includes principals, vice-principals, master teachers, etc. Teachers holding degrees: open plan, 16%; control schools, 18%. Number of male teachers is in brackets.

3 - Excludes non-teaching principals, vice-principals, etc. Calculated by principals.

4 - Staff Experience Quotient - a weighted factor based on years of teaching experience of the whole staff.

5 - As assessed by respondents.

Table 1, "Selected Characteristics of Open Plan and Control Schools," was prepared from data collected by the "Pre-Instructional Conditions" subcommittee of the study task force. This group consisted of principals and other staff of both open plan and conventional county elementary schools. They developed a list of "pre-instructional conditions," or characteristics of the school, the staff, support services, administrative and organizational practices which they thought might predetermine the quality of the instructional program. They held that significant differences in these conditions must be taken into account in evaluating the outcomes of instruction. Some subcommittee members checked official records and visited the seven schools to observe conditions unobtrusively. Others developed a schedule of questions to be put to the principals of these schools to determine other conditions, including principals' opinions on the adequacy of their services and facilities.⁶ From their investigations the schools as groups may be more or less matched in these aspects also:

- (4) they have equal access to support staff (both professional, clerical, and volunteers) although differences in use exist,
- (5) the range (but not quantity) of audiovisual teaching aids is identical,
- (6) the adequacy (range and quantity) of other instructional, recreational and administrative equipment is equivalent,
- (7) the number of teachers holding academic degrees does not differ significantly,
- (8) the ratio of pupils to teachers is not significantly different.

This subcommittee determined that certain initial, or "pre-instructional" conditions were not matched. The following appear to favor the control schools:

6. Attached as part of Appendix "A".

- (1) they have a greater quantity of audiovisual teaching aids (perhaps because these schools have had longer to acquire needed equipment),
- (2) they have smaller enrolments, and accordingly,
- (3) smaller staffs (thought to be favorable to the extent that it facilitates communication and other administrative functions although it may mean shallower pools of human resources)

Other differences appear to favor the open plan schools:

- (1) they possess greater space for instructional, recreations, and administrative activities
- (2) they have a higher proportion (60 percent vs. 40 percent) of male teachers,
- (3) they have more experienced staffs (as determined by use of a weighted scale which takes into account the distribution of inexperienced, experienced, and senior teachers rather than mere average of years teaching).

Taken all-in-all, the open plan and control schools are fairly well matched as far as such conditions are concerned. The small differences tend to offset each other.

The differences among schools within either group are generally greater than the average differences between the groups, e.g., enrolment.

The subcommittee also found variance in matters which are perhaps more in the nature of "operational outcomes" than "pre-instructional conditions." The open plan schools differ markedly and favorably from the control schools in these respects:

- (1) with one exception, the open plan schools have published formal statements of objectives while only one control school has such a document (and it tends to be more a description of procedures than of instructional goals),

- (2) open plan schools seem decidedly more flexible and responsive to individual differences both in the initial "placement" of a pupil and his subsequent regrouping (such as promotion).

A number of factors may account for these differences, e.g., the felt need to justify a "radically new" school concept. On the other hand, flexibility in responding to learners as individuals is claimed for the open plan school and the trend of observations by this subcommittee seem to support that proposition.

Summarizing, despite some obvious differences, the two groups of schools are well matched, on the basis of the reports given by the principals of the schools to their peers on the subcommittee. Independent spot-checking bore out the reports, both in substance and in virtually all details which it was possible to confirm.

In conclusion, it is well to recall the purpose of the control in an experiment - to determine whether observed outcomes might also arise from random variables in non-open plan schools. Comparisons of outcomes in any other sense especially to assess "worth" or "value" is illogical and unwarranted.

Method: Identifying Relevant Outcomes

While the "Pre-Instructional Conditions" subcommittee was busy dealing with the status of the control schools, another team was wrestling with the first methodological concern, identifying the tangible pupil behaviors that the open plan schools were trying to encourage. The core of this six-man "Products" subcommittee, the principals of the four open plan schools, simultaneously prepared two documents. One, a statement of their common philosophy for their schools, was intended for inclusion in this report and is reproduced below. The other consisted of a translation of their philosophy into seven directives (posed as questions as well as directions) intended to guide observers coming in to open plan schools so that they might give attention to the principals' views of the most relevant activities or conditions. We will return to these seven directives in the next section of this chapter.

The principals' statement on the common purposes of their schools harks back to the prevailing conditions of the 1960's, as described in Chapter I, and expresses their hopes for their schools in the years ahead. It relates clearly the local conditions which may greatly cloud the vision of what open plan schools are really about.

We subscribe in a general way to the premises, assumptions, and philosophies asserted by many serious writers on the open plan school. We accept that schools today need to react to the rapid social and

other changes which mark this age. Schools need to react to the knowledge explosion, to the communications revolution, to automation, and to other forces of a scientific or technological nature. We believe that, whether their schools are of the new open space concept or of the more traditional architecture, all good teachers are sensitive to the new conditions of these times and the new expectations society has of its schools. In short, we believe that it is not in the matter of awareness of prevailing historical conditions that the open plan and other elementary schools differ one from another.

There is a major difference between the basic teaching methodologies of open plan school staff and those of teachers in schools consisting mainly of self-contained or walled-in teaching areas which generally accommodate one teacher and about thirty learners. In open plan schools, several teachers are jointly responsible for one hundred or so pupils and thus are forced to interact differently with each other and with their pupils. They are forced to grow professionally when removed from the isolation of the standard classroom. In the open areas, teachers must literally face their colleagues and are accountable to each other for their program ideas. Whether they consciously attempt to integrate their programs or in other ways cooperatively plan and cooperatively execute them, open plan teachers are forced to face their professional problems collectively rather than as individuals. Open plan schools differ essentially from those where interior walls prevail. In the open area there is minimum possibility for that splendid isolation under which teachers previously have proceeded very much as their private preferences, or current fad, or professional experiences directed them, at least for much of their program. In the open space school, where many teachers and many pupils interact, where anyone may walk in or through, where for much of the time a teacher's activities do not proceed independently of a comprehensive learning program, the teacher is forced to grow as a professional worker, aware of alternative strategies, involved in planning with colleagues for the use of resources (even if only of the space).

We believe that, all other factors being equal, the open plan schools can offer any and every educational opportunity for learning that non-open plan schools can and do and should offer. This does not mean that we believe that identical programs are offered or outcomes achieved. Program priorities are based upon conditions which vary from community to community. We believe that the open plan schools of York County offer the opportunities for learning needed by their pupil clientele. We believe that our teachers can do everything they did before with the exception of operating for long periods

in splendid isolation. They cannot turn the clock back to earlier organization of space nor do we believe that for the large part there is any great wish to do so.

We believe that the open plan architecture and the program which is evolving in the open plan schools has created in the communities about these schools a consciousness of education which has not existed for many years. Some of this consciousness among the citizens of these communities may be negative. This is because many of the changes which education has accepted as necessary are embodied in the open plan school and in the provisions for open space teaching. Coming as it does - at the time when the centralization of school administration is being realized in the county and in the province and at the time when the small community school has given way to the central or greater community school - the open plan school is subject to the frustrations which arise from change. Frustration is not limited to the community but is also sometimes felt by the teachers. In its physical aspects and in its program the open plan school is "Change Written Large".

The open plan schools seem revolutionary to parts of the community and this is indeed very much the case, although not necessarily for program reasons alone. It is not merely the openness of the interior of the school. Nor is it the fact that there is carpeting in the library; libraries or learning resource centers themselves are somewhat of a revolution in the rural communities where some of York County's open plan schools are located. One must remember that it is not many years since the inhabitants of these communities came to the school to hear the inspectors, the principals, and the teachers report in public meetings to the community. These practices and the schools that served that rural culture have been demolished within a decade. Much opposition to change focuses on the school that has succeeded the old community school. Frustration over inflation and higher taxes and fears of the youth culture with its music, hair and dress styles, and its readiness to except or at least listen to the advocates of the drug culture all have combined with the frustration over centralization and the change which lies behind it. It is difficult, therefore, for the new open plan schools to communicate to a populace which is, in today's jargon "upright" because of these changes. The community that understands the nature of the times understands better the new schooling and the new schools whether or not these schools adopt or adapt the open plan philosophy. It is well always to remember that much which marks the program of the open plan school as new can be found in the older, so-called "egg-crate"

schools. The essential difference lies in the ways the organization of interior space allows or forces teachers to work toward the current goals of education.

Method: In-School Case Studies

One of the concurrent tasks of the "Products" subcommittee was the preparation of directives to the team which was to conduct in-school observations. The task was to prepare a list of directions or questions which adequately translated the priority goals of the open plan schools into observable or evocable pupil behaviors (we shall later refer to these as "criterion behaviors"). The principals of the subcommittee decided that these few directives covered their common major concerns:

- (1) Do the pupils share in "decision-making" in matters which touch them closely? (Two aspects: the opportunity to make wishes or preferences known and the use of the opportunity)
- (2) Note any truly individually initiated pupil activities (reflections of personal interests which are given a chance to flourish in the day's activities)
- (3) Are pupils given the opportunity to display personal responsibility? If so, how did they (or the single subject or observation) respond - get down to work, goof off, constantly refer back to the teachers for directions, reinforcement, etc.?
- (4) What evidence is there of cooperative planning (teacher-teacher or teacher-pupil), grouping for instruction, curricula, etc.? of inter-disciplinary planning (e.g. attempt to promote pupil growth in different disciplines in the same "lesson")?
- (5) Do pupils demonstrate the spirit of inquiry (e.g. by raising pertinent questions) and do pupils demonstrate pertinent skills in discovering answers? (The converse would find the pupils refusing opportunities to question, teachers "giving" answers all the time)
- (6) Do pupils respond to the teachers and other pupils attentively, courteously (e.g. do they listen to each other)? are they charitable in discussing others' viewpoints? do they display a sense of humour, are they "sociable"?

- (7) How do you feel about the environment? is it comfortable"? is it "warm"? by your personal standards. Would you like to be a pupil in this setting?

Descriptive observation studies are only as good as the instruments (observers plus their instructions). The demands on the observers in this study were considerable. In some instances, the observers are called upon to work back from direct observation of in-school activities to determine whether certain pre-instructional activities transpired (e.g., the search for evidence of cooperative planning). In another case, personal feelings or value judgments are demanded ("How do you feel about the environment?"). Observers had to collect personal data from school records and to evoke, in brief interviews, much information from pupils.

Their hardest job was to master classroom observation techniques generally foreign to their previous training and experience. For this task, short periods of instruction and practice were arranged for the seven elementary school principals and two master teachers who were invited to participate on the observation team.⁷ In addition to learning the use of tallying devices developed for this study, they practised use of the Classroom Environment Code Digest,⁸ a variant of Flanders' interaction analysis technique,⁹ and a "shadow study" technique that has been evolving since the 1940's.¹⁰ Copies of the tally forms for these methods are included in Appendix "A".

At the heart of this observation program was the "shadow study" technique whereby a randomly-selected youngster was observed as unobtrusively as possible by

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7. One principal subsequently withdrew due to ill health. The master teachers were asked to withdraw part way through the study when it appeared that their role might be misread as in conflict with their collegial relationship with teachers.
8. Adapted from F. G. Cornell, C. M. Lindvall and J. L. Saupe, An Exploratory Measurement of Individualities of Schools and Classrooms (Urbana: Univ. of Illinois, 1952).
9. Each separate exchange or component is recorded only once regardless of its duration. Interaction analysis variants are fully dealt with in Anita Simon and Gil E. Boyer, Mirrors For Behavior: An Anthology of Classroom Observation Instruments (Philadelphia: Research for Better Schools, Inc., 1967).
10. Its best known use is in John H. Lounsbury and Jean V. Marani, The Junior High School We Saw: One Day in the Eighth Grade (Washington, D.C.: Assoc. for Supervision and Curriculum Development, 1964).

by his shadow throughout an entire school day. At his convenience in late February or early March, each investigator was to shadow at least one open plan school pupil and one subject in a control school. In either setting, the investigator noted the various environments (physical, social, etc.) encountered by the subject of his observations. The overt behavior of the pupil was recorded at predetermined 10-minuted intervals. There was also an interview at the end of the school day. The observer followed a schedule of questions and his intuition in eliciting information from the pupil. The pupil may also have been asked to recall events or explain a concept taught during the day or otherwise demonstrate attentiveness or retention of learning. Later the observer extracted relevant biographical data from the pupil's records (previous achievement, rated learning capacity, attendance and health records, possibly family situation, etc.). This information provided a preface to the report of observations and may place events into context. These data were collected last so that they would not constitute "prior knowledge" which might influence observations (e.g., by creating expectations).

Interaction analysis is rarely paired with shadow studies but since such observations had been used in a study of open plan school teachers, it was incorporated into the York County study. This technique was modified to require that the observer record (at about 30-minute intervals) the interactions (e.g., verbal exchanges) between the teacher(s) and the pupil(s) over a three-minute period. The traditional interaction categories proved largely inappropriate in the open plan schools as there were few conventional exchanges (such as socratic lessons) between teachers and the pupils as a group. In the control schools the interaction analysis was generally a useful supplement to shadow study observations.

Only experienced teachers accustomed to visiting others' classes could hope to master the techniques and adopt the required objectivity after a short period of training. Only principals could be so readily freed to participate for full days at a time. As principals they were accustomed to shorter, "inspectorial" visits in which the focus was on the teacher and the purpose was remediation of deficient pedagogy or reinforcement of favored methodologies. Some observers had to adjust considerably to concentrate on someone else's directives or questions, to a focus on pupil performance, and to avoid snap judgments and prescriptive remedies.

Some made such a thorough change that they were hesitant to make judgments in areas where their opinions were solicited. As we will see in the next chapter, others were expansive when permitted subjective expression of feeling or thought. It is important to recognize the occurrence and appropriateness of such personal views. Either way, the case studies which follow make it clear "what it is like to be a pupil in an open plan school in York County."

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CHAPTER 3

"THE FLUID ACTIVITIES WITHIN": TEN CASE STUDIES

The 18 shadow studies - three each from the four open plan schools, two from each of the three control schools - constitute a fascinating, though unintended, spot-check on life in York County's elementary schools. It would be a rewarding, but fatiguing, exercise to review each study, even the three which could not be completed due to random events (a child unexpectedly fetched to a doctor's appointment, a teacher felled by the 'flu).

Of the 15 completed studies, 10 have been selected as representative cases. Six, all in open plan schools, are presented as rather full shadow studies. Four, including three studies in control schools, have been edited to avoid unnecessary repetition or detail. Their minute-by-minute descriptions have been translated to analytic narratives which, hopefully, capture the flow of classroom events. Data from all 15 completed case studies are included in the various summaries in the concluding chapter.

All 10 case studies reported here are as approved by the observers after the original drafts were edited. No changes have been made save to alter the pupils' names and to omit a few details of environment so that only those intimately connected with the schools can, with certainty, identify the major persons involved.

It will be noted that, mainly because three of the seven schools involved are senior public schools, many of the pupils studied are in grades 7 and 8. The random selection process produced fewer cases in kindergarten through grade 4 and, unfortunately, two of these were incomplete. A more serious imbalance is the low ratio of girls to boys in these 18 studies (about 1 to 4) as girls tend to conform more to teachers' expectations and to demonstrate more socially acceptable behavior in the presence of observers.

The appropriate order for presenting these case studies creates a problem. Almost any logical sequencing assumes an order that might be biasing. For example, proceeding from the case where the greatest number of criterion behaviors was in evidence to the case where the fewest of these behaviors were found might imply an order of worth not otherwise justified (that is, it is not to be automatically assumed that the school which fosters all the enumerated behaviors necessarily offers the "best" education). The least prejudicial pattern is one derived by random sequencing. The randomness may also require of the reader the greatest acuity in analyzing and evaluating the reported activities. In any case, this presentation mode approximates what the reader might find if he were to conduct 10 random visits to schools.

To avoid confusion, the seven open plan school studies are presented first, as case studies A to G. The three control studies are H, I, J. The five studies not reported, but considered in summaries are V, W, X (open plan schools), Y and Z (control schools).

CASE STUDY A

Peter is 11 years, six months old and in the Junior Division in a new open plan school. According to his records, a learning problem exists and, in general, his standardized reading tests indicates he is functioning about a year below his equivalent age-grade level (grade 5).

Location and time	Observed Behavior	Environment
Junior Division Open Area 9:00	Peter sits attentively in a group of 30 at the front of one section of the area.	An attractive, carpeted open area capable of accommodating perhaps 100 pupils. The regular teacher is absent and the principal initiates activities. Children "cloistered" in one section to begin.
9:10	Seated at a single desk at back of room. Chats with girl near him as activities begin.	A diagnostic test (mathematics) is introduced. Principal moves in and out of the area, supervising.
9:20	Working quietly by himself.	Test continues.
9:30	Gone to washroom.	Test continues.
9:40	Working quietly on math.	No supervision much of the time and class is restless and talkative.
10:00	Works at and finishes the math.	Math testing proceeds to conclusion.
10:10	Peter looks for his materials on a shelf then settles in to work by himself.	Spelling lesson. Teacher is still absent but assignment is on the blackboard. General confusion.
10:20	Manipulating geometry materials. Sits with a classmate.	Spelling continues.
10:30	Gone to washroom.	Spelling lesson continues.

Location and time	Observed Behavior	Environment
10:40	Working on spelling assignment steadily but quietly by himself.	Class increasingly restless. Little external supervision.
10:50	Recess.	
11:00	Pupil working quietly at front of room.	Regular teacher returns.
11:10	Working quietly at S.R.A. reading program.	Reading program. Generally quiet, studious atmosphere.
11:20	Wanders about to get reading card; chats with classmates on the way.	Pupils grouped for reading. Slow readers in this group.
11:30	Walks again to get reading card. Chats with friends and takes time going to work again.	Reading continues.
11:40	Pupil and teacher discuss assignment card together. Pupil then reads quietly.	Reading lesson continues.
11:50	Talking to girl; has been reprimanded several times for not working.	Reading continues. General restlessness and noise.
12:00	Lunch	
1:20	Peter walks around aimlessly, chatting with friends.	Another teacher directs this writing group. There is noise and confusion as pupils re-enter to begin afternoon program.
1:30	Listens attentively and asks a question.	Writing group at front of the area. Very attentive to instruction for creative writing assignment.
1:40	Peter is in the hall, carefully pacing off measurements. Appears engrossed.	Group members each to prepare a pirate map with directions to location of treasure.

Location and time	Observed Behavior	Environment
1:50	Questions teacher and returns to hall to correct his directions.	Teacher acting as a resource as pupils work at their "maps".
2:00	Peter has returned to the area and is writing the final draft of the pirate map directions. He wanders off for a drink and chats en route with others.	Half the group is now writing final drafts.
2:10	Peter is to be excused early for a dental appointment, so he is interviewed now.	

In the interview, Peter revealed himself as a well adjusted youngster. He reported he was never or rarely annoyed or excited or frustrated but, on the other hand, he seldom finds the school day stimulating him to great thought or to great interest. He does not react strongly to other possible adjectives suggested to him in the interview. He says that he likes the freedom the school's program offers, both the time to pursue his own interests and the help he receives from teachers. He says he would like a longer school day and more room to play outside the school.

If this was a typical day in the life of this lad, he is part of a challenging situation. First, the children are regularly regrouped for the various subject offerings, mathematics, reading, and environmental sciences, for example. This day the youngsters worked for considerable lengths of time without a teacher but during the course of the day they are normally exposed to several teachers. There appeared to be marked differences among teachers as to expectations in matters of discipline, and in freedom to move about and talk. Any given teacher's personal philosophy may also differ from the school's. There may thus be difficulties for younger pupils in comprehending the ever changing situation.

For the pupil under observation, this day brought several such situations. He worked, for instance, for the first two hours steadily and quite independently at his tasks. His frame of mind appeared to change suddenly when a teacher took charge of activities. At this point his attention appeared to wander, for which he was rebuked several times. Peter said to the interviewer that he felt the freedom permitted by the school and other teachers was squashed by this teacher in this instance. The interaction analysis at this point indicates that activities were chiefly teacher-dominated and Peter, if not others, had difficulty in adjusting to the rules that prevailed in such circumstances. Although this teacher organized children to work in ability groups, they were permitted little independence of thought and action. It might prove profitable for this teacher to follow a pupil on such a shadow study in order to note the possibilities afforded by the flexible space and flexible grouping of this school building, its

organization and its pupils.

In conclusion, this observer felt that the pupils generally did share in decision-making to a large degree. Their keenness to work at a project of their own choosing illustrated a depth of self-discipline and pride that was very noticeable. The program obviously reflected the cooperative planning by the staff for the benefit of the children at their respective achievement levels. In this attractive setting this worthwhile program appeared to this observer to make "education not only fun but purposeful to these students."

CASE STUDY B

Sharon, a grade 8 pupil in an open plan K - 8 school, is nearing her fourteenth birthday. Her most recent IQ test reports her as a high B and she has long been producing generally first class work. Teachers have previously identified her as a meticulous worker, perhaps somewhat over-confident of her abilities.

Location and time	Observed Behavior	Environment
House III 9:00	Sharon chats at a table with five other girls. Other pupils administer a traditional birthday greeting to a classmate before session begins.	Large open area subdividable into four by moveable walls. Area is carpeted and has an attractive colour scheme. Bulletin boards show art. About 34 pupils in this group.
9:10	Sharon checks her written work. Chats with friends.	Pupils organize 'selves informally and unhurriedly for the day's work. After morning announcements teacher organizes a language arts lesson, beginning with a review of assigned work.
9:20	Sharon talks to the teacher who has come to her table.	Pupils work individually.
9:30	Finishes reading quickly and fetches paper to begin written work. Converses with teacher at his desk and appears pleased by the exchange.	Teacher has briefed class on the historical period of plays outlined on blackboard. Class quietly reads dittoed materials. All work at materials at own rates.

Location and time	Observed Behavior	
9:40	Begins a new task. Sharon writes and responds diligently to written directions.	Teacher moves from table to table to discuss progress with individuals.
9:50	Moves her chair to watch the silent film "The Golden Fish".	Group has moved to another section of the area to view a film. Three other groups and their teachers also here.
10:00	Rapt attention. Reacts audibly to suspense and humour.	The film has evoked many emotions and children react dynamically during film and in following discussion.
10:10	Sharon is in a group of three girls. They decide to pantomime baton twirling as their performance.	Second phase of a double "English" period. Group now consists of 11 girls, two boys seated in a hollow square pattern with centre serving as a "performing" area.
10:20	Observes and evaluates other groups.	Creative expression, role-playing or acting by pupils, followed by mutual evaluation. Grouping appears to be according to interests.
10:30	Acts out baton twirling pantomime.	
French Area 10:40	Sharon applies herself to her workbook rather than to teacher.	French area has four walls arranged to contain language communications. Regrouping. Oral French lesson on pronunciation. Choral responses expected from the 13 boys, 14 girls.
10:50	After teacher slaps a pointer on her book, Sharon closes it and concentrates on the oral French exercises.	

Location and time	Observed behavior	Environment
House IV 11:00	Sharon is reprimanded for copying terms from blackboard rather than watching the film. She conforms.	Music area is enclosed for soundproofing. Half of the bulletin board is used for communications. Music data is on four blackboards. Teacher introduces and shows film of Leonard Bernstein. Class is generally attentive.
11:10	Doodles as she watches film. Teacher gestures and she stops. Slouches in her seat.	Film continues. A Haydn symphony is being performed. Teacher comments occasionally. Class appears to be enjoying lesson.
11:20	Sharon keeps her attention on the teacher and the film.	The teachers explains the meaning of the film content.
11:30	At conclusion of class, Sharon goes to lunch.	Teacher concludes with instructions for tomorrow's class.
House 1 12:30	Sits with two girls and readies self for lesson.	Math area is attractively decorated with items of interest on an extended partition wall. Some 13 pupils in this group for lessons on decimals. Teacher is businesslike but friendly in dictating the exercise.
12:40	Works at problems.	
12:50	Attentive to her work and teacher's explanations. Snaps at a pupil for misbehavior.	Teacher uses specially prepared materials rather than a text. Whole group does the same exercises.
1:00	Sharon volunteers a good answer.	Teacher demonstrates points through sample problems.
1:10	Goes to teacher for reassurance that she is progressing acceptably with the exercise. On return she kibitzes with table mates.	While group works at problems teacher has dittoed, teacher gives individual assistance.

Location and time	Observed Behavior	Environment
1:20	Chats with friends who have come to her table. Some tomfoolery. Sharon then moves to a boys' table to chat.	Group working individually on exercise to end of the class.
House 11 1:30	Plays tag on entering this area. Can't find her book so she sits with a classmate.	One extended wall creates an "L" shaped area. Social studies group consists of about 20 pupils. Lesson is on angles and degrees and teacher tries to correlate math and social studies.
1:40	Now has a text supplied by the teacher but is pencil-fencing with a friend. Then focuses on lesson.	Teacher is still trying to get the group to settle into effective learning. Mathematical division of circle related to time zones is the topic.
1:50	Continues working. Other pupils are making a map mural on a rear wall using the overhead projector. In another corner pupils of another class are carrying out individual activities.	Lesson progresses well. Maps, pictures, cutouts decorate the room. In the adjacent area another group is working on the identical topic, using same text and the socratic method.
2:00	Chats and laughs with friends. Exchanges notes with someone from another area.	Teacher has established this as a "personal" work period during which pupils may "catch up" or "clear up" any incomplete tasks.
2:10		Period ends and pupils moving for a science class.
House 1 2:20	Listens attentively and later talks with a teacher about gathering data for her project.	All walls moved to create a full open area for 60 pupils and two teachers. Groups of six or so have been previously set up for this "Nature" study. Challenging "discovery" projects are conducted in accordance with a plan (on the blackboard) which a teacher reviews. Area has cages, scientific apparatus, graphics.

Location and time	Observed Behavior	Environment
2:30	Sharon and her group discussing their project. They have hit a snag and consult with a teacher. Afterward they return to discussion of project.	Teachers circulate, giving assistance to groups as they record information. The noise of so many groups discussing their work is great and a teacher comments on "overactivity."
2:40	After some horseplay, Sharon rubbernecks at another table.	
2:50	On her return from washroom a teacher cautions Sharon against wandering off. She settles into work, fetching a reference book and recording her findings.	Teachers consult with groups.
3:00	Works until end of school day.	

Sharon enjoys her school life. She frequently finds it exciting and interesting and reports few or rare negative attitudes toward the school. She says she likes the way pupils can pick out their own activities and choose to do the things they want to. For Sharon, the school extends to the out-of-doors and she enjoys going outside for science classes to search for specimens. She would like more field trips and suggested other activities which could permit pupils to become more involved: the reestablishment of the school newspaper and the reactivation of the student council, for instance.

She thought this was a normal day in most respects but noted that she was tired due to staying up late the night before. This showed in her occasional shortness of temper. She also felt that she had not learned much in science class partly because her group was working on a topic which was difficult to get data on and, perhaps, because she was tired. She thought she had learned quite a bit in the social studies and music classes and when examined on several items had good recall except in mathematics where she had not quite grasped the concepts. She likes English, her best subject. The use of the film to get her involved in what was happening was most effective in her case. She felt quite caught up by the presentation and obviously the film had fired her imagination.

Sharon feels lucky to attend this school. Her friends go to other schools and she reports that they do not enjoy them. Sharon said that she likes the principal and vice-principal and from the day's activities it is obvious that she also has warm feelings toward most of her teachers.

CASE STUDY C

Martin, seven and one-half years old, is a pupil in the primary "class" at an open plan school. No IQ test has been administered but earlier this year he was interviewed by a psychologist because of his behavior. His learning capacity is average or better but it has been noted that he is hyperactive and inconsistent in his behavior. This is a summary of an observer's report on a day with Martin. The in-class observations have been omitted.

This appears to be a typical day in the pall-mall life of this youngster. Martin says he prefers this to his previous school. Here, he thinks, the books are better. He likes his classmates, the arithmetic and printing classes and would prefer to have more music in his program.

Although he is enthusiastic about the school, when questioned at the end of the day Martin could not recall the name of the film he had watched so intently or anything substantial about the film. He recalled that he liked it. Similarly he couldn't remember the story or even the type of story that was read aloud to his group in the library. Although he participated in most activities, Martin could not answer any questions about the day's work other than remembering the subjects he had done, where he had been and the type of presentation made as an introduction to new areas of work.

This apparent lack of retention is hard to understand for Martin not only relishes being at school he likes also to be right where the action is taking place. When the teacher was reading the lesson he was near the front of the group and constantly answered questions. However when assigned work to do, his attention often wandered. He did not complete as much work as most of the other pupils. One reason for this is the numerous conversations he had with other pupils. The observer overheard parts of some of these conversations and noted that they were usually on the topic or some subject that was of concern to him. At no time did his conversation seem foolish or talk for the sake of talk. Possibly the program must concentrate on reinforcement of learning for youngsters such as Martin.

Although there was a great deal of freedom for the children of this class or grouping (grades 1 - 2), you could see by the way one activity followed another that the program was well planned (structured). During the morning period the teacher responsible for the class was assisted by a Master Teacher who integrated her program with that of the classroom teacher. There were two other teachers with their classes (grades 2 and 3) in the open space, but they only came into contact once during the day. This occasion arose because a teacher discovered that the film "Ti-Jean Goes Lumbering" had to be returned by noon time; therefore she invited all pupils to see the film. Approximately three-quarters of the pupils including my subject accepted the offer.

Because there were long periods when children were busy working on a project or an assignment there were numerous opportunities for children to show personal responsibility. Most of the pupils I felt, rose to the occasion. However, at the same time, other questions must be asked. I personally felt that the amount of work children did during these periods was smaller than I usually see in a regular classroom. However, why would you expect a child to produce as much written work in this atmosphere as a regular

classroom when the child has so much time to discuss and work with others? This certainly raises many questions, such as what should be taught in school,? by what methods should we teach children? and how should we evaluate learning?

This area of the school had a nice friendly atmosphere. Children moved and activities took place and at all times there was the buzz of happy workers. Most of the children seemed to enjoy school and seemed to be accountable for their own actions. The discipline was firm and personal and, when the teacher found it necessary to intervene, no one was disturbed other than the pupil being asked to change his ways.

CASE STUDY D

Lars has just turned thirteen and is a grade 7 pupil in an open plan senior public school. Although he suffers hearing loss in one ear and has a rated IQ just slightly above average, Lars has an envious academic record of first and second class honours standing. On the Canadian Test of Basic Skills he is reading one grade above average and in math is two grades above average. Perhaps because of an unfortunate home situation, Lars appears cool both to adults and to youngsters of his own age although he is well accepted by them.

Location and time

Math 9:00	Sitting quietly awaiting for opening exercises.	21 pupils in group but 35 seats.
9:10	Answered first question. Hand up for most questions.	Teacher used book to check any answer in doubt. Question and answer method constantly used.
9:20	Not called on to answer in 10 min. Corrected wrong answers but most work correct. Attentive.	
9:30	Couple of comments to neighbour: little effort to participate.	Just beginning a 15-minute assignment which will run to end of class.
9:40	One question done in past 10 min. Talks to neighbour.	
French class 9:50	First into class but showed no great desire to pay attention. Everyone slowly moved to group but he sat by self in back corner of room.	Noisy. Teacher asked for quietness a number of times but no response.

Location and time	Observed Behavior	Environment
10:00	Questions asked in French by teacher: Lars has great difficulty answering. Shows little interest.	Noisy but most people working.
10:10	No effort to participate. Head down at times. Teacher tried once but seemed to give up as lost.	Noisy but majority of class is working. Value of the exercise is debatable.
10:20	Spent five minutes standing, talking and observing a friend. Not noisy but not participating in French.	Noisy. Most pupils not working.
English class 10:30	One of first to arrive. Sat quite quietly.	Teacher awaiting pupils so interaction began immediately. Noise from other classes very bad.
10:40	Completely silent.	
10:50	Other than moving to new classroom, no movement or comments to anyone. Seems to be paying attention.	Class moved to guidance room because of noise next door. Very quiet as teacher reads.
11:00	Moved to a new spot(voluntarily) so he could work on written assignment. In first five minutes only managed to get paper out on desk. When asked quietly by teacher for explanation of what he was doing, explained.	Class doing writing assignment. Pupil now sitting all by himself.
11:10	Apparently working.	Everyone busy.
11:20	Has produced one paragraph. (Seems to be par for class).	English class now moved to art room. Everyone busy, quiet.
11:30	Working on second paragraph. No comments or speaking.	Continues.
11:40	Continues to write.	Continues.

Location and time	Observed Behaviour	Environment
11:50	Continued to write and rewrite.	Continues.
Science room 12:00	Third one into class. Immediately looked over wildlife samples. Then to seat.	Room specially equipped for science. Live animals kept.
12:10	Answered a few questions. Seemed to pay attention. Smiled a few times (only time all morning that I saw this).	Teacher led discussion plus questions and answers. Teacher usually kept things moving. Used questions to keep disturbers engaged.
12:20	Attentive and silent.	Filmstrip shown.
12:30	Was not involved in question and answer exchanges. Made two comments to neighbour. Began to write note.	Pupils to write up notes. Many are busy commenting to neighbours but not too noisy.
12:40	Wrote an answer as requested. Only fair.	Continues.
12:50	Hurried out of class to get a newspaper. Then into gym for lunch. Sat with boy friend, talking.	Continues.
Social Studies class 1:20		15 in class; working on transportation.
1:30	Spent most time working with group leader setting up display board. Conversation on topic, but not of a high calibre of thought.	Very free atmosphere but most seem to be on topic.
1:40	Working at desk on his topic, cars. Seems very interested in work. Only one not working with a partner.	Work in small groups and teacher available for assistance.
1:50	Still working at desk. 10 minutes drawing a hot rod. Glued to seat.	Continues.

Location and time	Observed Behavior	Environment
Library 2:00	Move to library. Subject hurried to desk and immediately went to work on drawing.	Everyone free to take work and then read it or make notes. Noisy for a library.
2:10	Never moved from seat. Passed odd comment to neighbour. Changed from drawing to reading.	Continues.
2:20	Same.	Much movement and noise.
2:30	Read a little, talked a little but no sign of constructive learning or action.	
2:40	As above until end of this period.	
Gymnasium 2:50	As Lars did not have his gym equipment and would have been inactive during this class, he was interviewed at this time.	

Lars insists that this was a typical day. If so, he certainly faces a wide range of teaching abilities. He has always been a good student academically and is quite able to cover the traditional grade 7 course. Therefore teachers do not have to find special work for him. However, he shows little interest in his school work and only three teachers tried to find a spark. Most teachers did try to get around to all the pupils to see if they were working. The teachers of science, English and social studies found something for this boy.

It was obvious that the teachers of social studies have been planning cooperatively (although to this observer the material presented in social studies was far too easy to justify inclusion in the curriculum). Pupils were divided on the basis of interest between the teachers and teacher who had the most difficult group of children had the fewest number of students.

What worried this observer the most was the high noise level during some lessons, much of which was caused by other groups and the disturbing and smart remarks by some pupils. This must adversely affect learning.

It is easy to see why Lars enjoys this school more than other he has attended:

1. Some of his teachers try to make their classes interesting and pleasant.
2. Most of his teachers try to treat each pupil as an individual. (I believe some of them go too far, allowing pupils to interfere with others' opportunities.)
3. No one demands too much work from him and he is not challenged to produce at the level of which he is capable.

The atmosphere of this school confused this observer. The teachers were friendly and pleasant and seemed to know what they intended to teach. They seemed sincerely interested in the pupils. Yet I felt as if a great deal of confusion existed within the school. The noise of some classes, the remarks of some pupils, and the listlessness of many pupils bothered me.

There were opportunities to display personal responsibility but in nearly every case I saw it was being used poorly. The freedom to choose topics in social studies produced a large number that I personally felt were not even adequate for a grade 4 class. I did not see a teacher giving direction and yet it is usually agreed that the value of projects is in the steps that the pupil takes while doing them, not the finished product. The same applies to part of the French lesson, the only difference being that during this lesson discipline was so chaotic that hardly anyone was doing the assignment.

On the basis of one day in this school, I would not want to be a pupil there. If I was a good and eager student, I would worry that I would not be extended enough and that my opportunities to learn would be interfered with by the continuous noise and by a few smart alec pupils. If I was a poor student, I would have the opportunity in some subjects of doing work that was too easy. How could I improve myself? By doing only easy work, I might get a false impression of school and of my ability to succeed.

Unfortunately, one day is not enough to judge adequately when one is confused by the clash of opposites.

CASE STUDY E

Kelly is ten and one-half years old and in grade 5 at an open plan school. He has an A IQ but has not been working up to his potential. His parents were asked to come to the school for an interview but they did not. This is but one indication of what appears to be an unfortunate home situation. Beside lacking a suitable adult male in his home to relate to, Kelly lives in a neighbourhood that has facilitated his acceptance of delinquent older boys as models. Kelly's "hero" is an older boy from his neighbourhood who recently stole a car in Montreal and is now in jail.

Location and time	Observed Behavior	Environment
Home Room 9:10	Kelly sits holding his head at his table immediately in front of the teacher's desk. He does not volunteer answers to the questions.	Colorful, carpeted room with circular pupils' tables arranged in a scatter formation. Two or three pupils per table. A mathematics class (equivalent fractions) is in progress.
9:20	Sits playing with a pencil and watches the teacher as she works questions at the board. Appears to see the light and eagerly volunteers twice. Second time he explains a problem correctly.	Teacher is taking up homework, writing answers given by pupils on the blackboard. Some pupils volunteer as teacher questions. A chart of pupils' efforts in math and spelling is on a wall.
9:30	Kelly begins to work then gazes about and speaks to the girl behind him. After playing with his fingers he tries the work again.	Pupils working intently at questions teacher has put on the board. She is helping one boy.
9:40	Kelly asks the girl behind what 8x8x8 is. He slaps his foot on the floor and plays with a pen. Flips pages of his book and pokes the boy who comes to sit behind him.	Teacher is moving from pupil to pupil, helping with problems. She helps Kelly. Friendly manner. Pupils talk softly to each other about the questions.

Location and time	Observed Behaviors	Environment
9:50	Kelly plays with his table while marking. He smiles when teacher comments upon lack of understanding. Responds correctly when called on.	Pupils exchange papers for marking. Pupils give oral solutions, teacher writes on board. Pupils obviously enjoy this procedure.
10:00	Plays at desk and fidgets. When putting his workbook back on shelf behind observer he questions observer. Asks name, where from, and then shows and tells observer about characteristics of the open area not previously noted.	The marking completed and papers returned, class turns to spelling. Math and spelling books exchanged on the storage shelf.
10:10	Writes a few lines but generally wasting time, fidgeting, gawking about.	Independent work in spelling some pupils dictating words to others. Noise level rises then settles down.
		Recess, 10:15 to 10:30
10:40	Kelly wanders about, wasting time. Goes for a drink and settles down at the last moment with his reading group, the largest and apparently the slowest.	After recess each pupil settles in to his own reading assignment. There are about six groups. Teacher working with Kelly's group first.
10:50	Kelly is removed from the group and set to work at a table by himself. Does some work but spends much time lolling in chair and gazing about.	As teacher finishes with the group she discusses individual assignments with pupils. They accept criticism well.
11:00	Kelly blows on his hands and gets gets down to work. Interrupted by another pupil, he expresses an opinion. Teacher directs this pupil where to find an answer. Kelly goes over to continue discussion with the pupil then returns and eventually resumes work.	Pupils working on individual assignment while teacher consults and helps pupils who are handing in assignments.

11:10	Making a nuisance of himself. Reprimanded by teacher but does little work.	Continues as before. Low reading group working industriously.
11:20	Talks to neighbours, does some work.	Continues as before. Pupils working quietly.
11:30	Teacher talks to Kelly about his work. He lolls about. Kelly is one of the first to start getting ready for lunch but one of the last to leave the room.	Continues to end of morning class.
11:30- 12:30	Kelly stays for lunch, as do most pupils. He eats with two friends.	At 12:30 pupils return to their class and may read or work on projects.
12:40, 12:50	Kelly and two others are making flying saucers from paper plates. Paints industriously. Objects to plan to use "expensive" tracing paper.	
1:00	Leaves room briefly then returns to help clean up. Moves to front only when called.	Pupils cleaning up then gathering at front of room. Teacher reviewing maps made the previous day.
1:10	When a movie was announced, Kelly took off (1:05).	Film
1:20	Kelly has not returned.	Teacher trying to elicit variety of ideas to develop a paragraph on "The Great Storm".
1:30	Kelly returns and joins, briefly, the group. Soon he is at bookshelves with two friends, apparently looking for information on "Flying Saucers".	Continues.

Location and time	Observed Behavior	Environment
1:40	Kelly and his two friends slipped out at 1:32, perhaps to continue study on "Flying Saucers".	Pupils at seats quietly completing their paragraph - writing exercise. Teacher supervises.
1:50, 2:00	Kelly still "missing".	During this recess some pupils remain inside to watch a film while others go outside.
2:10	Kelly back with group.	Recess lasts longer than usual due to break in film.
2:20	Kelly is required by teacher to work on his math from his desk directly under teacher's nose.	Boys given a period to finish outstanding work while the girls have a physical education class. Most are finishing work, some are using reference books.
2:30	Kelly is reading about "Flying Saucers" and doing some math.	Boys working steadily on projects or unfinished assignments.
2:40	The teacher encourages Kelly and he works until interrupted by a girl. He wastes time until taken for interview by observer.	Girls have returned and they too are given these last minutes of the day to complete work or projects.

Kelly says that this was not an average day for him inasmuch as he has a cold, an earache, and a toothache. Kelly says there are several things he likes about the school especially the equipment, the many books, the principal and vice-principal. Apparently he needs to feel a sense of ownership, as reflected by his praise of the equipment and books and his later indication that he did not like the fact that books must be returned to shelves rather than kept in a desk of his own. His respect for the male authority figures in the school seems to confirm the lack of appropriate adult male model in his own home. Kelly says that he frequently feels bored, confused, frustrated, mistrustful and guilty. School does not appear to be stimulating his sense of curiosity and he indicated that he was only occasionally interested, amused, hopeful or excited. Kelly likes the reading program but does not like the math which he says confuses him. Because he was anxious to catch his bus, it was not possible to test Kelly for learning. On the basis of observations it would be surprising if he had absorbed much of what

was present in his class.

The following characteristics of the program, the pupils and the teachers were noted.

1. There had obviously been considerable planning to facilitate pupil initiated activities or activities conducted at the learner's own pace. For instance, a pupil decides how long he needs to master the words in a particular lesson. His dictation is given to him by another pupil. The dictation consists of sentences which are checked by the teacher previously to being administered. In reading, pupils choose their own book, and in science, social studies and health there was evidence that pupils had selected their own topics. Other opportunities for truly pupil-initiated activity appeared to exist.
2. While pupils were given opportunities to pursue independent discovery activities, some pupils required considerable help in completing projects and the teachers acted as resources in locating materials for research and creative expression. For instance, several children were interested in particular topics and inquired from the teacher where they might find material. In one case a group was directed to the resource centre. Further investigation revealed that they had found books relevant to the topic but time did not permit the observer to discover whether the pupils used the materials effectively.
3. A wholesome warm atmosphere seemed to exist and for the most part the pupils were courteous to each other, to the teacher and to the observer. I would enjoy being a pupil in this setting.

CASE STUDY F

Doug is eight and one-half years old and in the Primary division group (equivalent to grades 1 -4) in an open plan school. Although he is below average in reading skills and has difficulty with spelling, he is a B student. This has been attributed to his reliability and his ability to work independently. He is a very slow writer which may either indicate that he is very meticulous or perhaps, of today's performance is to be judged, he is slow at getting down to work. He is a very friendly and personable boy.

Location and time	Observed Behaviors	Environment
Primary Division Area 9:00	Doug, who has a cast on one arm, leaves his coat, boots and lunch in the storage area and sits on the floor talking with a neighbour waiting for the school day to begin.	An open plan area capable of accommodating up to perhaps 100 pupils. There are three "arms" with common central area to this attractive carpeted area. A group of 16 pupils sit at front of one arm, facing one of the few blackboard surfaces during opening exercises.
9:10	Doug sits, fidgets with a pencil, talks to a neighbour but does not participate in the current events discussion.	A current events discussion led by the teacher who sits at the front of the group. Pupils stand to answer or express thoughts.
9:20	Hunts in cupboards for a book then checks blackboard for directions. Works quietly and alone in his group of about 10.	Papers have been distributed and a spelling lesson in progress. The tables are now in use: they have been arranged in different groupings, circles and L-shaped. The teacher circulates from group to group for individual work. PA interrupts twice.
9:30	Waits with hand raised until teacher arrives. After discussion, erases something and continues work.	Teacher moves from pupil to pupil as questions raised. Some pupils put on running shoes and depart for gym.
9:40	As he is not part of this gym group, Doug continues to work, using a reading text now.	Only three pupils remain in this area.
9:50	Idly taps pencil and gazes about, then returns to work.	
10:00	Alternately working and chatting to the two girls in this area.	The three pupils move about, the girls obviously restless.
10:10	Works with occasional interruption from the two girls.	Continues.

Location and time	Observed Behaviors	Environment
10:20	Walks into hall, chats and returns to play with a balance. Returns to his chair briefly before leaving to prepare for gym.	
Gymnasium 10:30	Some horseplay before class starts.	Large, bright, well-equipped gymnasium (with stage): pupils getting equipment or in free play as session begins.
10:40	Seems inattentive to instructions and hence copies what others do or tries to outdo them. Exercises with the ropes.	Equipment set up in various areas of the gym. There are 30 pupils in this group and one teacher. Teacher gives verbal instructions but controls group movement by hand claps.
10:50	Matwork. Pupils noisily trying new activities.	Teacher circulates, watching, instruction. Groups move on signal clap.
Primary Division Area 11:00	Takes math text and watches teacher using blackboard to develop lesson.	Mathematics. Two teachers plus an associate master teacher (working with a supply teacher).
11:10	Fetches math workbook from cupboard then roams about. Plays with weigh scale. Borrows a pencil and chats before starting to work.	Some pupils working on the carpet, others informally scattered about the area.
11:20	Alternately talks with neighbour and works. Seems able to shut out surroundings when he wants to.	Pupils move freely: one uses a large abacus to solve a problem. Older pupils helping younger.
11:30	Watches activities idly. Sharpens pencil for a third time.	Teachers working with individual pupils.
11:40	Raises hand; teacher comes and helps Doug with problem. Many others waiting for teacher help.	Pupils working individually, and noisily, while teachers circulate.

Location and time	Observed Behaviors	
11:50	Doug watches proceedings from his chair.	Teacher collects workbooks then hands out short test. Considerable noise from other part of area.
12:00	Dismissed, Doug turns in his book then brings his lunch into the area.	End of morning sessions.
12:30	Out to play.	One teacher supervises in the area, another in the yard.
1:15	Takes a place, along with 36 other pupils, on the carpet in front of the blackboard in another part of this Junior Division area.	
1:30	Listens to discussion and receives his workbook. Music from adjacent area makes discussion difficult.	Recap of previous activities and discussion of coming work. Teacher has set up filmstrip projector.
1:40	Fetches a workbook and a pencil and went to a table to work.	Teacher moves about giving help and instruction. Noise level is so high that pupils have to speak loudly to be heard. A PA announcement cannot be heard above the din.
1:50	Laughs and talks with a neighbour. Studies other pupil's work on bulletin board and discusses the topic with person who had worked on the topic. Nothing written by pupil in 22 minutes.	Teacher settles the class down.
2:00	Doug's hard at work drawing and labelling a freehand sketch of Mexico. Often talks with neighbour.	Teacher creates small groups to discuss topic under study. Some pupils just playing: one boy chokes a girl until she hits him.

Location and time	Observed Behaviors	Environment
2:10	Working happily at his own desk, occasionally talking or smiling with neighbours.	Teacher at map, working with a group. Much rough play, even fighting and wrestling, by about 20 percent of group.
2:20	Doug sits at his desk, ruler in hand, quietly watching the other pupils.	Pupils now continually following the teacher to show work. They are usually praised for the efforts and given constructive criticism regardless of how much done.
2:30	Sits on table talking to friends awaiting start of the film.	While teacher directs pupils in tidying room and putting books away, five pupils set up film-strip projector and ready the room.
2:40	Watches until taken for interview.	Two groups, about 40 pupils, watch the presentation. Various pupils asked to read the captions aloud.

Doug thought this was an average day. He noted that of course in summer there is more play out-of-doors. Perhaps play is very important in Doug's life: he is pleased that his school has a gymnasium and that he likes the big schoolyard and all the things in it that can be played or worked with. He said, "I dislike nothing about the school", and that he is frequently amused with and interested in its program. His response to the other descriptive adjectives confirms this viewpoint. For instance, he says he is never or rarely bored or confused or embarrassed or frustrated or feels guilty or mistrustful or nervous or resentful or uninvolved or vexed. When asked what change he would like to see made in the way the class or school is run, he replied "Nothing, I am very happy the way it is".

Doug's work in his notebooks was neat. His recall of the day's work was fairly good. Although spelling is a difficult subject for Doug, he could easily recall the suffixes studied in the day's written work, for example, stick - sticky. From the social studies lesson he easily recalled the communities that he had made notes on during the work period - Australia, Puerto Rico, Iceland, Jamaica, and Canada.

The observer noted the following characteristics of the day's program:

1. The children do not really share in decision-making. They very often make their wishes or preferences known but only had rare opportunities to share in the final decision.
2. In the physical education period the pupils were motivated to initiate activities. With the facilities available the pupils came up with some unique ideas and really tried to put them into their activities.
3. The pupils were given the opportunity to display personal responsibility. The pupil observed was very reliable and conscientious and teacher supervision for him was minimal. He liked to play and was very slow in starting but he kept at his work once he got going.
4. Cooperative planning among the teachers was evident. The interchange of pupils for subject matter was readily observable, a schedule of activities having been arranged beforehand by the teachers.
5. The pupils demonstrate the spirit of inquiry. Pertinent questions were continually raised, so much so that in a mathematics lesson the teacher had to get help from another teacher in order to solve one pupil's question. That the teacher was willing and able to do so is noteworthy in itself but it is not the same as setting the pupils to discovering solutions.
6. The pupils respond well to the teachers and other pupils. But when periods are quite lengthy this is not always evident. The children show a good sense of humour and the majority of pupils were quite sociable.
7. The general environment was quite comfortable and warm. Even when some of the children were not behaving as desired, for example, in rough play, the teachers never raised their voices but quietly and firmly motivated the children to more desirable responses. The children were very responsive and happy.

Finally, the traditional categories of interaction analysis do not lend themselves to observation in an open plan school. Difficulties arise in using the analysis because so many teacher-pupil interactions are going on at the same time. There are many pupil-pupil interactions occurring simultaneously. The traditional interaction analysis used in this day's observations shows that more than three-quarters of the teacher-pupil interactions consisted of teachers asking questions or giving directions and students responding. This might give the mistaken impression that traditional socratic lessons were involved when, as the running descriptions show, this was anything but the case.

CASE STUDY G

Although he is only ten years nine months old, Dave is in grade 6 in an open plan senior public school. He looks his age and in comparison to his classmates appears fairly immature. But he is very bright (A IQ) and very active. He apparently works as the moods suit him and has recently come through a time when his work was very poorly done.

Location and time	Observed Behavior	Environment
Science Room 9:00	Dave sits by self and reads a cartoon book for the first few minutes.	Bright attractive room. Many displays and experiments set up. 15 pupils in class move about room quietly working on experiments or projects.
9:10	Teacher checks Dave's assignments, suggested ways he might improve or finish items.	Pupils handling their responsibilities well. Teacher moves around helping, suggesting.
9:20	Dave carries out experiments. Occasionally stops to see what other pupils are doing.	Pupils still working individually.
9:30	Completing his experiments.	Occasionally teacher interrupts pupils to mention some information of interest to all.
9:40	Writing up observations to complete his science notes.	Pupils still working on own.
9:50	Dave finishes work, goes to front desk where teacher is helping some pupils. Dave seems to be considered a nuisance and a pupil tells him to scram as he is bothering others.	More pupils have come in from physical education class. They also begin work on experiments or projects.
10:00	Moves from table to table making unwelcome comments and observations.	Most pupils are writing up results of experiments.

Location and time	Observed Behavior	Environment
10:10	Talks to a friend; he doesn't seem to want to start something new for final minutes of period.	Teacher helping as needed.
10:20	Teacher isolated Dave and points out work he has to do. Dave works briefly then goes to teacher's counter waiting to ask a question, slips away and watches another experiment.	Period about to end, so class tidies room.
Music Room 10:30	Takes his time moving to this class.	Pupils getting ready for class, get recorders. (20 in class).
10:40	Appears interested in recorder; remains relatively quiet during lesson.	Music Room seats arranged in semi-circle. All students have recorders (English flutes). Various groups asked to play, then all together.
10:50	Dave playing with rest. Seems to enjoy playing but not particularly proficient at it.	Class playing recorders following notes on a music sheet. Teacher helps individuals in difficulty.
11:00	Dave is singing but very lightly so that others cannot really hear him.	Recorders are put away and popular music sheets brought out for singing. Kids very enthusiastic at this.
11:10	Dave seems to lose interest in music, just mouthing words, left room quietly, back to locker.	Period came to a close and pupils move to next class.
Physical Education 11:20	Dave goes to change room, gets ready, goes into gym.	Boys get ready for physical education class and then sit in group in gym.
11:30	Dave shoots as instructed; not making many successful shots.	Each boy with a basketball, following instructions, practices shooting.

Location
and time

11:40	Dave follows instructions then waits turn to get into scrimmage.	Practice finished. Brief scrimmages.
Lunch Room 12:00	Dave eats lunch.	Lunchroom holds over 200 pupils sitting at tables.
12:10	Goes outside to play broomball.	Some pupils borrow brooms, go outside to play broomball.
Reading Room 12:30	Dave goes to reading skills room and begins work.	Reading room set up for pupils to work individually at S.R.A. reading kits.
12:40	Dave works steadily.	All working well.
12:50	Still working.	Pupils go to lab to get booklets as needed on their own.
1:00	Continues.	Continues.
1:10	Dave chats briefly with friends discusses an assignment with teacher, leaves for library.	Period ends and pupils move.
Communi- cations 1:20	Dave chats briefly with friends discusses an assignment with teacher, leaves for library.	Large open area with pupils working in groups at own interests.
1:30	Dave discusses assignment with librarian, checks some reference books then returns to communications room.	About 35 pupils in room and others in library. Teachers move about talking to pupils.
1:40	Dave and teacher go over an assignment. Dave working on, detail by detail.	Pupils becoming somewhat restless; some may have been in room for over an hour.
1:50	Works diligently throughout the remainder of the period.	Most pupils getting ready to move.

Location and time	Observed Behavior	Environment
Mathematics 2:00	Gets math text and begins working immediately.	Large room, tables in groups. Pupils work on own with varying levels of enthusiasm.
2:10	Still working well, at times conferring with neighbour regarding a problem on math.	Much movement in math class.
2:20	Working hard on assignment from text. Seems quite content with work.	All working on individual programs. Progress is traced on charts.
Geography 2:30	Settles down quickly after asking question of the teacher and works hard.	A large room with tables in groups. Pupils working on own.
2:40	Works steadily, stops to ask question, continues.	Teacher working with various groups.
2:50	Losing interest, spending considerable time sharpening pencil, looking at others, etc. Taken now for interview.	Continues.

Dave says that physical education and shop are his favourite subjects. Science bores him and the two-period session is too long when he is not interested, he says. He doesn't like the freedom that he is allowed and would like to see all subjects compulsory with no options. He would like to see individual classes rather than open spaces. He doesn't think work should be left to the individual student. He wants to be pushed or he feels he won't do the work.

Dave has had very poor results in the first term and staff is concerned about his underachievement as he is obviously far above average in ability. His parents, in fact, were to come to the school to discuss his lack of progress on the day the observations were made. One wonders if the opinions Dave expressed in his interview are his own or those of his parents. He is obviously under pressure from both home and school to improve and, according to his teachers, his efforts on the day of the observation were above normal. When the interviewer tested him on the day's lessons, Dave appeared to have retained well any lessons in which he was interested.

Dave may be correct: he may need a firm, structured program where one teacher could keep a good eye on him. Open plan systems may allow the immature to escape for some time the attention of teachers and to accomplish very little.

Here are some of the characteristics of the open plan system in Dave's school:

1. Pupils are allowed considerable scope in their choice of projects and topics which form an important part of their program. If the teachers feel the activity has merit the pupil is allowed to pursue it.
2. Pupils are given the opportunity all day to display personal responsibility. Some work hard, some don't. Dave works occasionally on his own but usually only when a teacher is at hand to observe him.
3. Grouping is very prevalent and instruction is usually in the form of four pupils and a teacher discussing an item. Apparently much cooperative planning among staff has taken place. Traditional interaction analysis is irrelevant as at no time during the day was a traditional lesson taught.
4. Some pupils are inquisitive although considerable numbers use the freedom to avoid becoming involved deeply with a teacher or another pupil.
5. Pupils are certainly sociable and willing to discuss and consider other viewpoints. There is always some not attentive and in the large room they are hard to spot.
6. The environment is warm and comfortable but I suspect a feeling of vagueness by many pupils as to where they are going and what is expected of them.

As a pupil I might like this setting but as a parent I would not want my child to be involved at this stage. I personally feel that most elementary pupils are not mature enough to handle or really want the responsibility this system places on them.

CASE STUDY H

This study, from which the classroom observations have been omitted, was made in a rural K - 8 school. Although two additions were added in the 1960's the school still lacks many of the facilities thought desirable for today's educational programs. For instance, the square footage of the school library equals exactly the number of pupils in the school, a grossly inadequate situation.

Gary is 12 years and seven months old and a grade 7 pupil. The average of his four group IQ tests is 102. It is interesting to note that the standardized test ratings have dropped from 122 in grade 1 to 88 in grade 7. This drop has been gradual and appears to parallel the deterioration of the home situation. Gary's academic progress has been poor and his parents apparently are not very interested in this.

In some ways Gary is typical of boys his age. He likes physical education classes and wishes there were more; he likes all sports and, at this time of year, hockey especially. He says he likes music least about the school program, that he feels he can't sing very well. Strangely, he recalled the new song taught in the music class that day although he had trouble remembering that much of most other lessons. Gary is a contradiction in other ways. For instance, he reported that he was never or rarely frustrated but that he was frequently vexed. He said also that he was frequently confused, nervous and embarrassed and that most of the time he felt obligated to do better in school. He said that he was rarely or never curious about things but paradoxically he saw himself as a thoughtful, optimistic or hopeful person much of the time. Although he could remember little of the mathematics presented in the morning period, Gary could recall facts and new material covered during the latter half of the day.

Possibly his problem is not inability to comprehend new material but a lack of motivation to retain it. Why this should be so, if this is a correct analysis, is hard to fathom. Both the general and classroom environments were comfortable and warm and gave pupils every reason to feel accepted and secure. Academic progress was quite evident for the majority of the pupils. Good pupil-teacher relationships appeared to exist. The pupils were courteous. For example, in the music class, a pupil presented her books for the observer to use without having to be asked by the teacher to do so. Although there was a large number of pupils (35) in a standard classroom and this restricted pupil mobility, pupils were allowed to move freely to get texts, wall maps, and globes to search for a solution arising from a problem in the geography lesson, exemplifying how the methodology rose above the physical limitations of the environment. Moreover, it was obvious that the pupils had some say in decision-making. When discussing the program with one of the teachers it was discovered that time had been spent with the pupils to try to evaluate aims and how these aims could be achieved. Individually-initiated activities were given a chance to flourish. This was evident during the recess and noonhour periods as well as in the social studies (current events) program. Pupils were given personal responsibility in the noon activities as well as in the subject matter of particular classes. Many other activities observed on this day were the direct result of cooperative planning involving pupil-teacher discussions. Pupils used the opportunities to question the teachers and each other. The mathematics period was extended because spontaneous questioning arose over the topics under consideration.

Interaction analysis reinforces these observations of the nature of the program. For instance, collectively the most frequent general activity was the teacher asking questions or giving directions, commands or orders to which pupils were expected to comply. Pupil response was the second most frequent general activity (as might be expected). Significantly, there were a great number of instances noted where the teacher accepted and used the ideas of pupils, praised and encouraged their reactions or actions, accepted their feelings and provided opportunities for pupils to initiate rather than merely respond. There was little lecturing or mere giving of facts or opinions about content or procedure by the teacher.

In short, attempts to account for Gary's failure to progress must look beyond classroom circumstances, most likely to his home, especially if we accept the concluding sentence from the investigator's summary: "As an observer I felt that I would not mind being a pupil in this setting".

CASE STUDY I

Here is a summary report, omitting the detailed in-class observations, of how a relatively new senior public school in a rural town provides for a pupil within its more traditional organization of space.

Bill appears to be a very sensitive boy, perhaps overly concerned about his surroundings. He is quite engrossed in school activities although he maintains he is trying not to be overly involved. Perhaps he is a little too academically oriented. He claims what he likes most about his school is the teaching staff. He likes lots of help and he likes strict teachers. He says he is "disgusted by others fooling around". In his own assessment of his attitudes during this school day he said he was curious, interested, and stimulated by the day's offerings. In reacting to other adjectives he again indicated very favourable attitudes towards the day's program. He saw this as a normal, average day.

It was apparent, however, that when he was bothered by any aspect of a class he was inclined to be easily distracted. When tested for what he had absorbed during the course of the day he showed very good recall and comprehension of the lessons. He is not without opinions on what is needed to make the program better: a stricter discipline including one that would apply to weak teachers as well. He would like more French in the program and less music.

Looking at the day's activities the observer found little evidence of cooperative program planning. There were few opportunities for pupils to share in decision-making with the exception of one class. As well, there were, despite this one exception, few

truly individually-initiated pupil activities. There was some opportunity for assuming personal responsibility for learning which the pupils, predictably, used poorly. Although the pupils displayed a natural spirit of inquiry when given the opportunity, they were not generally sociable, but rather ridiculed each other at most opportunities.

Although the environment was warm and bright, the attempt by teachers to dominate proceedings (as shown clearly in the interaction analysis) may have offset some of the natural advantages of this relatively new and well-equipped school. While teachers dominated activities, they did generally balance well their attempts to influence youngsters indirectly as well as directly. For instance, giving directions was the most common means by which teachers sought to influence pupils and lecturing was not uncommon. Teachers raised many pertinent questions and, in accepting student responses, were not niggardly in praising or encouraging, or accepting and using the ideas and feelings of the pupils. There were few observed instances where the teachers found it necessary to try to change the student behavior to acceptable patterns by criticizing or justifying their authority in an arbitrary fashion.

CASE STUDY J

Here is a case study of another senior boy at the same school as in case study I. The classroom observations have been omitted.

Walter is 13 years two months old and in grade 8. His records report an IQ of 120 and his academic achievement has been steady and satisfactory throughout the grades with marks around the 70 percent level. Though smaller than most boys his age, Walter, a quiet boy, appears to be in good physical health and well adjusted.

Walter says he enjoys school and has no changes to suggest. After-school activities are his favourites. Literature causes him some difficulty, he thinks, but he doesn't find any part of the school program distasteful. When a college level article was read in science class, he was bored. Other parts of the program excited him or at least held his interest. Generally, he prefers the learning activities which allow him the most scope to work on his own. When tested in the interview at the end of the day he indicated a good recall of the day's lessons.

Walter appears to be one of those persons who can adjust fairly well to any learning situation. When some of his classmates misbehaved it did not seem to bother Walter in the least and he was able to continue learning. The day's program showed a variety of methodologies as recorded both in the written description of environment and in the interaction analysis. There was a good balance of methodology with teachers

attempting to influence indirectly, by asking questions for instance, and also attempting direct influence, by giving directions or commands, for example. There was minimal lecturing and no reported instances of criticizing or justifying authority arbitrarily. On the other hand there were few instances recorded where the teachers attempted to influence indirectly by accepting students feelings, praising or encouraging, or accepting and using the ideas of students. Pupil talk consisted almost entirely of responses to the teacher who had initiated the contact or solicited pupils' statements. There were few recorded instances in the interaction analysis where pupils took the initiative, raising questions or introducing new dimensions to a discussion. Significant opportunities to share in decision-making, show responsibility, or discover answers by themselves were lacking.

CHAPTER 4

SHADOWS AND REALITIES: SUMMARY AND DISCUSSION

The purpose of this study was to produce a clear picture of what it is like to be a pupil in an open plan school in York County in this year of grace. Writing seven years ago, Lounsbury and Marani observed that¹¹

The real curriculum is the one the pupil experiences. . . . Many curriculum publications describe what should be. Seldom does one tell what is. Almost always the curriculum is portrayed in terms of the vision of the adult. Rarely does anyone attempt to see the curriculum as it is experienced by the pupil.

The case studies in this study are, in a sense, the shadows of the reality of life in York County's open plan schools. As shadows they are subject to the distortions created by the intensity and angle of the light thrown against the reality. The limited number of shadows (cases) as well as the biases (angles or perspectives) of the observers and the intensity (thoroughness) of the study must be considered in any evaluation of the realities from which the shadows project. For the reader of this report, the clearest picture is but a shadow, and reality but an inference.

The chief characteristics of a shadow, to stretch the analogy, are determined by the location of "the reality" in respect to the light source and to the plane against which the shadow is cast. The plane, of course, is the observer's eye. The seven directives prepared by the open plan principals for the observers (see page 16) may be considered the light source.

Let us look at the shadows thrown forth as answers to the questions and directions. We should note that four of the directives are treated in Table 2, "Summary of Observed Characteristics as Requested by Principals," as dual questions. Hence, for example, the opportunities to share in decision-making or to display personal responsibility are distinguished from the use of the opportunities. Thus there are 11 rather than seven items in the table's grid of school characteristics.

Even a quick glance at Table 2 reveals that the criterion behaviors, taken as a whole, are more likely to be found in the open plan schools. For such a small sample one shrinks from talking about "significant differences" (in the sense of inferential statistics). But it is appropriate to talk about "trends." It must be

11. Op. cit., v.

TABLE 2: SUMMARY OF OBSERVED CHARACTERISTICS AS REQUESTED BY PRINCIPALS

School Case Study Grade equivalent	OPEN PLAN										CONTROL				
	A 5	B 8	C 2	D 7	E 5	F 4	G 6	V 3	W 7	X 7	H 7	I 7	J 8	Y 5	Z 5
1(a) decision-making -opportunity	X				X			X			X	X			
(b) decision-making -use of opport.	X				X			X			X				
2. pupil-initiated activities	X	X	X		X	X	X	X	X	X	X				X
3(a) responsibility	X	X	X	X	X	X	X	X	X	X	X	X		X	X
(b) good use	X		X		X	X		X	X	X	X				X
4. coop. planning	X	X	X	X	X	X	X	X			X				
5(a) inquiry		X			X	X	X	X	X	X	X	X			
(b) discovery		X			X					X	X				
6. pupil response	X	X			X	X		X	X	X	X			X	
7(a) warm environment	X	X	X	X	X	X	X	X	X	X	X	X	NC		
(b) would like to be a pupil here	X	NC	NC		X	NC	X	X	NC	X	X		NC		
	9	7	5	3	11	7	6	10	5	8	11	4	0	2	4

NC - Not commented upon by observer

Case Studies V - Z not reported

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remembered that we are not engaged in making comparisons for the sake of assessing worth. Rather we want to determine whether the criterion behaviors are unique (and possibly attributable) to the open space architecture. What we find, in fact, is a fairly well differentiated distribution for some but not all the criterion behaviors.

There is a trend for four behaviors and two conditions to be more readily observable in open plan schools than in the control schools:

- (1) pupils initiate activities which reflect their personal interests and these activities are given a chance to flourish in the day's activities,
- (2) pupils make (generally) good use of opportunities to display personal responsibility,
- (3) cooperative planning (teacher-teacher, teacher-pupil) takes place,
- (4) pupils demonstrate the spirit of inquiry by raising pertinent questions,
- (5) the environment is judged by observers to be "comfortable" or "warm",
- (6) the observers indicate that they would like to be a pupil in this setting.

For the other five criteria differences are too small to be meaningful. There is a slight edge in each instance which seems to favor the open plan school.

The majority of case studies in both types of schools found evidence for two criteria, "the opportunity to display personal responsibility" and "pupils respond to the teachers and other pupils attentively, courteously." This seems to speak well of the schools. In the majority of cases in both settings there was indication that pupils were neither sharing significantly in making decisions on matters which touch them closely nor demonstrating pertinent skills in discovering answers by themselves. Perhaps at least the first of these is a hard characteristic to discover on a one-day visit.

Considered as groups, the average achievement of the criterion behaviors or conditions by the open plan schools was about seven (of 11). The average for the control schools was about four. As Table 2 shows, there were discrepant cases in both types of schools.

The general trend of the evidence is to support the claim that the criterion behaviors are associated more closely with the open plan schools. There is no clear indication of causal relationships, at least for half the criteria. The hypothesis that the open plan school facilitates the demonstration of certain outcomes is probably supportable for only four behavioral criteria plus the two personal attitudinal conditions reported by the observers.

This is not, or should not be, the end of the analysis. One cannot read through the case studies (or the mass of data from which these summaries were drawn) without developing an awareness that the presence or absence of the criterion behaviors or certain environmental characteristics does not tell the whole story about the quality of the educational offerings.

Would anyone consider that Kelly (Case Study E) had a rich learning experience because all the 11 criteria were met? Did Dave (Case Study G) learn less than he might have had all 11, rather than just six criteria, existed for him? Dave seems to want less personal responsibility, in fact, and at the present this might be desirable. The failure of Gary (Case Study H), a pupil in a control school, to progress despite methodologies much admired by open plan advocates, might not be corrected by a radical change in any of the criteria, such is the nature of his problem. Is Sharon (Case Study B) at that age where either more or less freedom to discover herself might be disastrous? If so, and if teachers adjust their styles to suit individuals or groups, might this not explain why, in the same school, we can find some wide variations in meeting the criteria (for example, case studies E and F are from the same school, as are H and Y also).

Looking Ahead

If this is the case, then it seems important to provide the "educational containers which mold themselves to the fluid activities within." Perhaps the danger is the interpretation of "fluid" as "formless" or "undisciplined" or "fleeting".

To the casual observer in either open plan or conventionally built schools many learning situations must seem shapeless if not chaotic. While this need not be the case, as is clear from some of the case study situations, no doubt the sharing of decision-making powers, the delegation of responsibility, the premium on inquiring and seeking, or other current methodologies of classroom management, result in confusion and frustration for some youngsters in some situations. Probably no existing architectural form or program format accommodates the achievement of all the external or internal goals which teachers and learners pursue. But if a school is really flexible, can't it provide the appropriate setting not only for unstructured events but also for formally structure activities which arise, for instance, from the nature of a disciplined body of knowledge? If teachers - as a result of the insight

born of training, experience, or native wit - can recognize the youngsters or learning situations requiring something other than what is commonly called for in open plan philosophies, why not provide for it? This is the line of reaction heard from opponents of doctrinaire open plan advocates. Indeed, this true flexibility appears to be what is actually occurring in at least some of York County's open plan schools. One finds quite structured learning programs prescribed for some individuals. Such activities might resemble conventional practices of some years ago, if enough youngsters are involved.

If we can imagine the shadow of the reality of the open area learning being cast now on the eyes of the participants, what readings might these pupils give us? Quite independent of this study, but very well timed, the following letter to the editor was published in The Tribune (Stouffville, Ontario, May 14, 1970):

Dear Sir:

We are a group of responsible students of Whitchurch Highlands' school - the new open concept school.

We have been reading letters in the local newspapers concerning the type of program offered here. There is little truth in what the critics say.

It is our opinion that few of these people have actually visited out school and seen the system in operation. Therefore, we feel they have really no basis upon which to voice their criticism.

Those who have visited the building, the longest they ever stay in [sic] one single day - some a morning and some an afternoon. And they only see the things they really want to see - like maybe a couple of kids fooling around or a messy project. They never see what the majority are doing.

Contrary to the views of some parents, our teachers do teach lessons - Mathematics, Reading, Language and French on a regular basis and occasionally, lesson [sic] in History, Health, Science and Geography on an individual basis.

Whenever a student requires assistance on a project or a problem, there is always a teacher available to assist.

In conclusion, we would like to make it known that we do not like our school 'because we don't have anything to do'. We like the people, the teachers, the references, the surroundings and the work.

Students of Whitchurch Highlands School

(Names withheld upon request)

The notion of substituting the plane against which the shadow of reality is cast also suggests, for future studies, the use of the open plan school teacher as a plane. What is it that they, as distinct from their principals, want to see provided as learning opportunities and methodologies? What image of present conditions is registering against their retina? We are once again fortunate in finding something relevant though not intended for this study. The essay with which we conclude this report was written by one open plan school teacher (not at the same school identified in the previous letter) in consultation with his colleagues:"¹²

I LIKE

I like to stimulate keen, young minds and to see the bodies attached to them scatter in all directions in groups of two and three to examine, explore, argue and, hopefully, to refute the validity of my hypothesis. . . to see them return as the reason of their own argument urges them to challenge my audacity. . . to see another group return with rhetoric and rationalization to admit that none had really understood the problem in the heat of their emotional involvement. . . and to find later this group holding its own in argument on the very topic.

I like to see two members of one group find that what they need does not lie with their present group and to see them searching the room for the people who can better satisfy their needs. I like to see the naturalness of common interest and common need.

I like to see that spark as one boy in the group remembers an article he read recently in the library and he hurries off hoping it's still there. . . another child, deep in the puzzlement of his task, suddenly recognize that the solution may be to find the little girl who helped solve his problem yesterday.

I like being able to confer with colleagues immediately without waiting for lunch hour when the problem will be as cold as the chicken.

I like to see the child alone in the corner insulated from the intense activity around him by his absorption in his book. . . to see students involved in proving to themselves that this task they chose was more important than the one that was suggested to them. . . to see a boy tenaciously defending his position against the

12. To be published in Leisure Leaf, 11, (May 29, 1970).

unreasoned criticism of his peers.

I like the ebb and flow of people and ideas, the intensity with which students become involved in teaching themselves and others.

I like to watch students making decisions. They seem to do it so easily.

I like to hear laughter and a child quietly saying "thankyou".

I like to watch a child wrestling with a problem interrupted only by his own emotion and not by the banging doors and rattling bells. . . the task alone dictating the depth of his reasoning.

I like to see a child silencing his best friend in the interests of the discussion and the anticipation on the faces of the members as they realize the answer is almost theirs. . . . to see the little girl surrounded by a headset completely oblivious to the heated discussion taking place not four feet away.

I like to watch a teacher gathering up a dozen students, who she discovers, have the same need and to watch them jostle their way to an unoccupied corner where they will help each other solve a common problem.

I like the fact that only six students were interested in Chinese poetry. . . at the beginning. . . .

I like to see the embarrassed look on the boy's face when the girl he has been watching for ten minutes looks up and smiles.

I like knowing that, behind the cover of the car magazine, the big boy near me has a library book hidden from his equally large friends.

I like knowing that the child's mind will have more questions at the end of the day than at the beginning.

I like to watch a girl, fascinated by the sound of her own voice on the tape recorder, suddenly realize that her speech actually does lack clarity and emphasis.

I like to see a child recording the concept he has grasped on the master board and then searching the list for another concept which offers a challenge to his ability and a satisfaction of his interest.

I like to know that failure will be without defeat and success without arrogance.

I like knowing that students feel that school is a good place to be.

I like our open plan class. . . three teachers. . . one hundred kids. . . one room.